REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-8, 10-13, 16, and 18-21 are pending in the present application with Claims 3, 4, 6, and 7 withdrawn from consideration. Claim 1 is amended by the present amendment.

In the outstanding Office Action, the drawings were objected to; Claims 1, 8, 10, 12, 13, 16, 18, 20, and 21 were rejected under 35 U.S.C. § 103(a) as unpatentable over Cluzeau (French Patent Application FR 2738669) in view of Fujimura (U.S. Patent No. 4,426,722); Claims 2, 5, and 6 were rejected under 35 U.S.C. § 103(a) as unpatentable over Cluzeau, Fujimura, and Fabian (German Patent Application 2053881); and Claims 11 and 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over Cluzeau, Fujimura, and Kassing (German Patent Application DE 3049153 A1).

Applicants thank Examiner Mondt for the courtesy of an interview extended to Applicants' representative on April 4, 2007. During the interview, the differences between the claims and the applied art and the previous amendment to Figure 8C were discussed. Further, clarifying claim amendments, similar to those presented herewith, were also discussed. The examiner indicated that the amended claims appear to distinguish over the applied art and that amended Figure 8C does not introduce new subject matter. Arguments presented during the interview are reiterated below.

Regarding the objection to the drawings, Applicants respectfully submit that amended Figure 8C presented in the previously filed amendment does not introduce new matter for the following reasons.

The specification discloses at page 23, last line to page 24, line 3 that a neutron source 82 is "either a neutron generating tube of the same type as that in Figure 7A or a particle accelerator of the same type as that in Figures 7B or 7C." Based on this disclosure in the

IN THE DRAWINGS

The attached sheets of drawings include changes to Figs. 1A and 1B. These sheets, which include Figs. 1A and 1B, replace the original sheets including Figs. 1A and 1B.

Attachment: Replacement Sheets

specification and the fact that each of Figures 7A-7C shows that a target has neutron emissive parts facing an incoming ion beam, Applicants respectfully submit that Figure 8C also has the neutron emissive parts on the target facing the ion beam because the device of Figure 8C uses the technology shown in Figure 7A-7C. Accordingly, it is respectfully requested that amended Figure 8C does not introduce new subject matter.

Regarding Figures 1A and 1B, these figures have been amended as suggested by the outstanding Office Action. Thus, it is respectfully requested this objection be withdrawn.

In view of the outstanding rejections of the claims on the merits, independent Claim 1 has been amended to more clearly recite that a emissive and non-emissive parts are being arranged to form a non-uniform pattern and a target emits a neutron flow including plural neutron beams coded by a pattern of a mask. The claim amendments find support in the specification, for example at page 11, lines 9 and 10 and in Figures 2A, 3A, 3B, and 4C. No new matter has been added.

Briefly recapitulating, amended Claim 1 is directed to a target that includes neutron emissive parts and neutron non-emissive parts. The neutron emissive parts emit neutrons during the bombardment with particles and the emissive and non-emissive parts are arranged so as to form a non-uniform pattern as a coded mask. The target emits a neutron flow including plural neutron beams coded by the pattern of the mask, as shown for example in Figure 8C.

With regard to Cluzeau, the outstanding Office Action recognizes on page 4, lines 10-13, that "*Cluzeau does not necessarily teach* the limitation of neutron non-emissive parts with only the neutron emissive parts emitting neutrons during bombardment with said particle, said emissive and non-emissive parts being arranged so as to form a pattern as a coded mask."

In addition, Cluzeau does not teach or suggest (i) a non-uniform pattern, and (ii) a target that emits a **neutron flow** including plural neutron beams coded by the pattern of the mask.

To cure some of the above-noted deficiencies, the outstanding Office Action relies on Fujimura, which teaches an x-ray microbeam generator that includes a target 135 (see Figure 1) with discrete x-ray emissive spots 520 uniformly embedded on a non-emissive base 510 (see Figure 5). The discrete x-ray emissive spots are also shown in Figure 1 as spots 130.

Applicants note that the x-ray generator of Fujimura produces a single scanning electron beam (not labeled in Figure 1) which scans the target 135 as disclosed at column 2, lines 53-58, and "[a] sequence of spots is scanned with the electron beam to produce a corresponding sequence of discrete x-rays. If, for example, the electron beam were scanned across five horizontally adjacent spots on target **135**, a sequence of five separate x-ray beams would result."

In other words, when the target of Fujimura is bombarded with a single scanning electron beam, the target produces a succession of x-ray discrete beams and at any given instant, only one discrete x-ray beam is emitted according by the spot that is reached by the scanning electron beam.

Therefore, Applicants respectfully submit that the resultant x-ray beam in Fujimura is not a neutron flow coded by the pattern of the target because Fujimura emits only one beam at a time. In addition, as discussed during the interview, Fujimura discloses a **uniform** pattern, which is different from the claimed non-uniform pattern.

Thus, the device of Fujimura does not teach or suggest emitting a neutron flow that includes plural neutron beams coded by the pattern, and a non-uniform pattern as required by amended Claim 1.

Further, Applicants respectfully submit that one of ordinary skill in the art would not modify the device of Cluzeau based on the teachings of Fujimura because the device of Fujimura cannot achieve the high flow of plural neutron beams as the target in Fujimura works as a single point target that emits x-ray at a given instant.

Fabian and Kassing have been considered but none cures the deficiencies of Cluzeau and Fujimura discussed above.

Accordingly, it is respectfully submitted that independent Claim 1 and each of the claims depending therefrom patentably distinguish over Cluzeau, Fujimura, Fabian, and Kassing, either alone or in combination.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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